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(71) Applicant: DATACARD CORPORATION [US/US]; 11111 West Bren Road, Minneapolis, MN 55343 (US).

(72) Inventor: DUEA, Duane, R. ; 13620 Harwell Path, Apple Valley, MN 55124 (US).

(74) Agent: SCHUMANN, Michael, D.; Merchant, Gould, Smith, Edell, Welter & Schmidt, 1600 Midwest Plaza Building, Minneapolis, MN 55402 (US).

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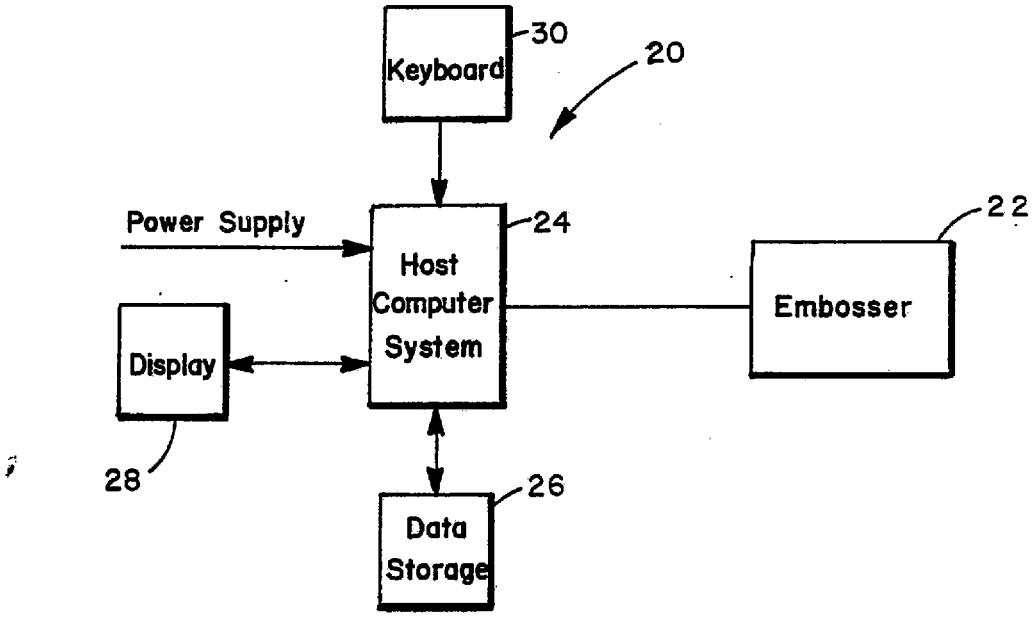

(57) Abstract

A method and system (20) for embossing characters on a card (44). A programmed host computer system (24) which interfaces with an embosser (22) includes logic (50) for computing character movement time and card movement time for each character to be embossed on the card (44), selecting the longest of the two values for each character as a character movement time, embossing the character having the shortest character movement time, and then iteratively performing the same process for the remaining characters such that the characters are embossed in a very time efficient manner.

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AMENDED CLAIMS

[received by the International Bureau on 06 February 1989 (06.02.89)
original claims 1 and 4 amended; other claims unchanged (3 pages)]

1. An embossing system for embossing a card at a plurality of character locations with characters in accordance with particular character data to be embossed on the card by use of a rotatable embossing wheel assembly including a set of character embossing elements disposed at predetermined spaced locations about the periphery of the embossing wheel assembly and card transportation means for moving the card so as to individually place each of the character locations to be embossed into embossing position relative to the embossing wheel assembly; the embossing system comprising:

a) character data memory means for storing in a predetermined data format, character data to be embossed on the card, the character data including for each character, its character location on the card relative to an index position and an identifier associating each of the characters with one of the character embossing elements of the embossing wheel assembly;

b) embossing wheel memory means for storing the location of each of the character embossing elements on the embossing wheel assembly relative to a home position; and

c) data processing means including:

i) means for computing for each character to be embossed on the card, a first time required to move its associated character location into embossing position;

ii) means for computing for each character to be embossed on the card a second time required to rotate its associated character embossing element into embossing position;

iii) means for comparing the first and second times for each character to be embossed and saving the longer of the two times as a character movement time;

iv) means for comparing the character movement time of each of the characters to be embossed and selecting the character having the smallest of the character movement times;

v) means for causing movement of the card and the embossing wheel assembly into embossing position for embossing the character having the smallest of the character movement times;

vi) means for discarding the embossed character from the characters in the character data memory means which are yet to be embossed; and

vii) means for iteratively selecting the character from the character data memory means having the smallest character movement time and embossing the same until all of the characters have been embossed.

2. A system in accordance with claim 1, wherein the data processing means includes means for embossing all the characters on a given row of the card sequentially according to their character movement times before any characters appearing in other rows of the card are embossed.

3. A system in accordance with claim 1, wherein the data processing means includes means for embossing all the characters to be embossed on the card sequentially according to their character movement time regardless of which row and column the characters might be in.

4. A method for transferring to a medium at a plurality of character locations characters in accordance with particular character data to be transferred to the medium by use of a character transfer mechanism and a transport mechanism for movement of the medium relative to the character transfer mechanism, the method comprising the steps of:

a) determining for each character to be transferred a first time interval required to move the medium relative to the transfer mechanism such that the character is in a transfer position and a second time interval required to move the transfer mechanism into the transfer position;

b) comparing the first and second time intervals for each character to be transferred and saving the longer of the two time intervals as the character movement time;

c) comparing the character movement times for the characters to be transferred and transferring the character having the smallest character movement time; and

d) iteratively comparing the character movement times for the characters which have not yet been transferred and sequentially transferring the characters based on their character movement times.

5. A method for embossing a card at a plurality of character locations with characters in accordance with particular character data to be embossed on the card by use of a rotatable embossing wheel assembly and card transportation means for moving the card so as to individually place each of the character locations to be embossed into embossing position relative to the embossing wheel assembly; the method comprising the steps of:

a) storing in memory in a predetermined data format character data to be embossed on the card, the character data including for each character, its character location on the card relative to an index position and an identifier associating each of the characters with one of the character embossing elements of the embossing wheel assembly;

b) storing in memory the location of each of